URBAN DISTRICT OF FULWOOD.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

For the Year ended 31st December, 1944.

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PRESTON:
Printed by Lambert Brothers (Preston) Limited.
46 Glover's Court,
1945.

To the Chairman and Members of the Urban District Council of Fulwood.

Mr. Chairman and Members of the Council,

I have the honour to present my Annual Report upon the health of the inhabitants of this district during the year 1944.

The embargo placed by the Minister of Health upon the publication of details of population and other matters of interest had not been removed at the end of the year, but the usual statistics of births, deaths, infectious diseases and other details of the sanitary service in the district are included in this Report.

The health of the district remained satisfactory in this fifth year of the war, and there was no definite evidence of malnutrition in the younger ages of the population during the year.

Infectious Diseases produced an increased number of notifications. Measles, Scarlet Fever, Pneumonia and Whooping Cough in that order were responsible for the majority of the cases. Whooping Cough and Measles were introduced into the district by the evacuees from the areas around London. The cases of Pneumonia were in the older ages, and mainly in the residents of the institutions in the district. Diphtheria provided few cases and tended to be in the older ages. All the Infectious Diseases were of the mild type, the deaths were few and after-effects absent.

The supervision over the quality of the milk supplied in the district was continued and increased. No case of sickness, infectious or otherwise, was attributed to milk during the year.

The presence of evacuees from the London area in the district raised problems and difficulties which were not always easy of solution. Fortunately their standard of cleanliness was superior to that of the groups of previous years, but the control of contagious and infectious diseases introduced by them occupied much time in the early days of the billeting.

Many more details of the water undertaking are now allowed to be published, and are given at the end of this Report.

Statistics and Social Conditions of the Area.

Area in acres—3,268.
Population (Census 1931)—7,387.
Registrar General's estimate of population (Mid-1944)—11,390.
Number of inhabited houses (Census 1931)—1,501.
Number of inhabited houses (1944 rate books)—3,396.
Rateable value, £85,609.
Sum represented by a penny rate—£346.

Social Conditions.

The district is almost entirely a residential one. Farming, milk production, and a steam laundry are the chief industries.

There are several public institutions in the district, details of which were given in preceding reports.

So far as is known, there was no unemployment in the district during 1944.

Vital Statistics.

Births.	1944		
Live Births—	M.	F.	Total
Legitimate	88	85	173
Illegitimate	6	4	10
Total	94	89	183
Birth Rate per 1,000 of population		16·0	
Still Births—	M.	F.	Total
Legitimate	1	2	3
Illegitimate	—	—	—
Total	1	2	3

Rate per 1,000 total live and still births—16.

Death Rate of infants under 1 year per 1,000 births—60.

Death Rate of legitimate infants per 1,000 legitimate live births—57.

Death Rate of illegitimate infants per 1,000 illegitimate live births—100.

	1944		
	M.	F.	Total
Deaths.	90	94	184
Death rate per 1,000 of population from all causes		16·1	
Deaths from Cancer (all ages)		23	
Deaths from Pulmonary Tuberculosis		·8	
Deaths from Puerperal Causes		Nil	
Deaths from Measles		Nil	
Deaths from Whooping Cough		Nil	
Deaths from Diarrhœa (under 2 years)		Nil	

	Per 1000 of Population				Maternal Mortality Rate		
	Live Birth Rate	Crude Death Rate	Death Rate from Pulmonary Tuberculosis	Death Rate from Cancer	Per 1000 Live Births	Per 1000 Total Live and Still Births	Infantile Mortality Rate
Mean 5 years 1934-38	10·7	13·8	0·20	1·88	6·05	5·69	40
Mean 5 years 1939-43	13·2	14·7	0·29	1·84	3·83	3·62	41
1943	14·0	12·6	0·25	2·22	Nil	Nli	30
1944	16·0	16·1	0·70	2·01	Nil	Nil	60
County of Lancaster (1943)	17·32	13·26	0·41	1·77	2·74	2·64	54
England and Wales (1943)	16·5	12·1	N.A.	N.A.	N.A.	1·84	49

(N.A. not available).

These tables show an increased Birth Rate, an increased Death Rate, and an increased Infantile Mortality Rate. The rise in the Death Rate from Cancer will be noted in comparison with the average of the previous two five-year periods.

The figures are compiled from those supplied by the Registrar General or by the Public Health Department of the County Council.

Population.

In the 1931 census the population of Fulwood was 8,816 (Males 4,329, Females 4,487). This number included over 2,000 resident in the public and other institutions in the district. It was estimated that in 1944 the numbers in the institutions were not less than in 1931.

In 1944, the Registrar General's estimation of the numbers of inhabitants resident in Fulwood was 11,390, a reduction of almost 300 on that of the previous year.

Deaths and Death Rates.

The tables above give the numbers of registered deaths corrected for inward and outward transfers. Comparative figures for two five-year periods, for England and Wales, and Lancashire, are given.

The table below shows the summarised causes of deaths in 1944.

Analysis of Causes of Death.

	1944		
	M.	F.	Total
Heart Diseases	27	29	56
Intra Cranial Vascular Lesions	7	8	15
Other Diseases of the Circulation	3	1	4
Cancer all sites	10	13	23
Pulmonary Tuberculosis	3	5	8
Non-Pulmonary Tuberculosis	1	0	1
Bronchitis	6	3	9
Pneumonia and Influenza	3	2	5

Analysis of Causes of Death (continued)	M.	F.	Total
Other Respiratory Diseases	2	0	2
Diseases of Digestion	2	6	8
Nephritis (Kidney Diseases)	3	2	5
Diabetes	1	1	2
Infectious Diseases	1	0	1
Venereal Diseases	1	0	1
Prematurity, Congenital Defects, Malformations	3	2	5
Deaths due to Violence	4	3	7
All other causes	13	19	32
Total all causes	90	94	184

Deaths from Pulmonary Tuberculosis.

The number of deaths from this disease was almost three times greater than in 1943. The death rate per 1,000 of population was 0.70, almost double the rate for Lancashire as a whole (0.41).

Deaths from Malignant Diseases.

The number of deaths was less than in 1943, and the death rate per 1,000 of population, 2.01 was also slightly less. The death rate for Lancashire from these diseases in 1943 was 1.77.

Infantile Mortality.

The table below shows the deaths of infants during the first year of life in Fulwood. The Infantile Mortality Rates for this district, for Lancashire, and for England and Wales are given also.

The numbers of Deaths of Infants under 1 year.

	M.	F.
Legitimate	5	5
Illegitimate	1	—
Total ...	6	5

Infantile Mortality Rate for Fulwood—60
Infantile Mortality Rate for Lancashire (1943)—54.
Infantile Mortality Rate for England and Wales (1943)—49.

This Infantile Mortality Rate for Fulwood—60—must be compared with the Rates for 1942 and 1943, which were respectively 24 and 30.

An analysis of the causes of death in babies under 1 year is given in the table below.

	M.	F.
Premature Births	2	1
Congenital Malformations, etc. ...	1	1
Broncho-Pneumonia	1	1
Digestive Diseases	2	1
Accident	0	1

General Provisions of Health Services of the Area.

Medical Officer of Health:—G. G. Wray, M.D., Ch.B., D.P.H. (not in general practice).

Other Public Appointments:—Medical Officer of Health, Longridge U.D.C. Walton-le-Dale, Asst. County Medical Officer.

Sanitary Inspector:—D. B. Southworth, M.R.San.I. (whole time).

Other appointments:—Public Vaccinators:—Dr. Denman, Garstang Road, Fulwood; Dr. J. Laurie, Fulwood Institution.

Certifying Factory Surgeon:—Mr. A. Toulmin.

Laboratory Services.

The Laboratory of Preston Royal Infirmary continued to provide skilled assistance by the examination of Bacteriological and Pathological specimens. All the samples of milk were examined in this laboratory.

For the diagnosis of diseases the following examinations were made:—

Swabs, B. Diphtheria—38.
Swabs, Hæmolytic Streptococci—35.
Sputum, B. Tubercle—6.
Faeces and Urine—Enteric Group. —11.
Other specimens—7.

Ambulance Services.

For accidents, for cases of sickness going to or from hospital, and for Maternity cases, the Ambulance Service of Preston Corporation was utilised. This arrangement was adequate.

Cases of Infectious Disease were removed in the Ambulance owned by the Infectious Diseases Joint Hospital Board.

Private Ambulances were available for non-infectious cases where required.

Nursing in the Home.

Preston Nursing Association provided nurses for home visiting in the southern parts of Fulwood. The northern part of the district utilised the nurses provided by the Broughton Nursing Association (affiliated to Lancashire County Nursing Association).

Hospital Accommodation.

General Diseases:—(1) Preston Royal Infirmary.
(2) Mount Street Hospital, Preston.
(3) Sharoe Green Municipal Hospital.

All these hospitals provided accommodation and adequate treatment.

Maternity:—All three hospitals provided beds in separate blocks or sections of the hospital. The facilities for treatment were excellent.

Infectious Diseases.—The Preston, Fulwood and Longridge Joint Hospital provided beds for the isolation and for the treatment of Infectious Diseases.

Small-pox.—Cases of this disease—there were none—can be isolated and nursed at Elswick Small-pox Hospital.

Malignant Diseases.—A special section of Preston Royal Infirmary, officered from the Christie Cancer Hospital, Manchester, was used by patients from this district. X-ray, Radium, and other forms of treatment were available.

Services Provided by the County Council for the Area.

Midwifery.—Two County Midwives were provided. Their names, addresses and telephone number are given below:—

Miss Elizabeth Johnson, C.M.B., S.R.,
Miss E. Johnson, C.M.B., S.R.,
Brynville, Cadley Causeway.
Telephone No.: Preston 6368.

Ante-natal.—Clinics for inspection, advice, and treatment were available at Preston Royal Infirmary and Sharoe Green Maternity Hospital. A Clinic for private patients was also available at Mount Street Hospital.

The Ante-natal Clinic of the County Council at Longridge for those patients who preferred to attend a clinic not attached to a hospital was also available for women of this district.

The County Council Consultant Service could be utilised where specialist attention was required.

Child Welfare.—A Child Welfare Centre was established in this district by the County Council early in 1944. It met at the Parochial Hall, Victoria Road, once per fortnight. For the portion of the year it was open there was an average attendance of over 40 children per session.

The other arrangements for Child Welfare were as in previous years.

School Children.—Medical inspections were made by the Assistant County Officer for the area and by the School Nurse. The facilities for any treatment required were given in detail in the reports for 1942 and 1943, and the arrangements for the disposal of children suffering from special defects were also mentioned in the same reports.

Tuberculosis.—All facilities for diagnosis, for examination of sputum, for X-rays, and for the treatment of patients were provided by the Lancashire County Council Tuberculosis Staff. The Tuberculosis Dispensary for this area is situated at Walton's Parade, Preston.

The table below gives the notifications and the deaths from the various forms of this disease in the year 1944.

Tuberculosis Notifications and Deaths.

1944

Age Period Years	New Cases				Deaths			
	Respiratory		Non-Respiratory		Respiratory		Non-Respiratory	
	M	F	M	F	M	F	M	F
0—1	...	...	...	...	...	...	...	...
1—5	...	...	1	...	...	...	1	...
5—10	...	...	...	...	...	...	...	...
10—15	...	...	...	...	...	...	...	...
15—20	...	2	...	...	...	1	...	...
20—25	...	...	...	...	...	2	...	...
25—35	3	3	...	...	...	...	...	...
35—45	1	...	...	...	...	...	...	...
45—55	1	...	...	...	1	1	...	...
55—65	1	...	...	...	1	...	...	...
65 up	2	...	...	...	2	...	...	...
Totals	8	5	1	0	4	4	1	0
	13		1		8		1	

Tuberculosis Treatment.

Number of admissions to Hospital or Sanatorium—9.
Number removed from the Register as recovered—3.
Number of deaths—9.
Remaining on the Register, December, 1944 (M. 27, F. 15)—42.

The Prevalence and Control of Infectious Diseases.

The table below gives an analysis of the cases of Infectious Diseases notified in the year 1944.

Notifiable Diseases (other than Tuberculosis).

Notifiable Diseases 1944	Total Cases Notified															
	Total Cases at all Ages	Age Periods—Years												Total Deaths	Hospital	
		Under 1	1–	2–	3–	4–	5–	10-	15	20	35-	45-	65 up		Cases remvd. to Hospital	Deaths in Hospital
Scarlet Fever	41	..	...	3	1	3	20	6	3	3	2	...	...	...	29	...
Diphtheria	13	...	2	...	...	...	2	1	4	1	1	2	...	1	9	1
Measles	75	4	6	6	10	4	40	3	1	...	...	1	...	...	...	...
Whooping Cough	26	2	6	8	2	3	5	...	...	...	...	...	...	...	..	...
Acute Pneumonia	40	9	3	3	...	3	3	1	1	7	4	5	1	5	...	...
Puerpural Pyrexia	20	...	...	...	...	...	...	...	2	17	1	...	..	...	...	...
Cerebro-Spinal Fever	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Acute Poliomyelitis	1	...	...	...	...	..	...	...	. .	1	...	...	...	...	...	...
Dysentery	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Erysipelas	2	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Other Diseases	4	...	...	...	...	...	...	...	...	...	...	...	4	1	...	... ...
Totals	223	15	17	20	13	14	70	11	11	30	8	8	6	7	38	1

Immunisation against Diphtheria.

In the year 1944, 49 children under 5 years and 28 children of school age were immunised. This number—77—is a reduction on the two previous years. Practitioners protected 25 of these children, and the rest—52—were protected by the Medical Officer of Health.

The Registrar General's estimate of the child population of Fulwood was 838 in the group up to five years, and 1,537 in the group 5 to 15 years. Of these it was estimated that 63% in the under 5 group, and 76% of the 5 to 15 group, were immunised at the end of the year.

Inspection and Supervision of Food.

Milk. The efforts to produce a better and purer milk supply were continued actively throughout the year. Frequent visits to farms, encouragement to the producers to improve their methods of production, and frequent sampling of the milk., all played their part in this campaign

The number of dairy farms in the district was 47, with approximately 780 cows. There were 9 dairymen (other than cowkeepers). During the year 80 visits were made to these farms.

The number of samples of milk taken for submission to bacteriological tests for purity was 146 (as compared with 92 in 1942 and 129 in 1943). Of these 98 were satisfactory and 48 unsatisfactory. For comparison the figures for 1942 and 1943 are given.

	Samples taken.	Satisfactory.	Unsatisfactory.
1944	146	98	48
1943	129	110	19
1942	92	58	34

148 samples of milk were submitted to tests for Tuberculosis. 147 of these were free of the Tubercle Bacillus, and 1 contained this Bacillus. Three of these samples were school milks, all of which were negative for the Tubercle Bacillus.

In order to control the bacterial quality of pasteurised milk, 28 samples of milk were taken and submitted to tests for correct heat treatment. 24 of these were sufficiently heat treated and 4 were unsatisfactorily treated. Appropriate measures were taken to ensure that the plant involved was repaired and correctly run. Subsequent sampling proved the efficacy of the measures adopted and applied.

There was 1 Pasteurising Plant in the district, and 4 persons were licensed to sell Pasteurised Milk.

Some of the milk retailed in the district is produced outside the Urban area.

Meat Inspection.

There was one slaughter-house in the area, licensed to slaughter horses for human consumption. All the horses slaughtered during the year were inspected for disease. The number of horses slaughtered and the number of organs diseased and seized will be found in Mr. Southworth's Report appended.

The slaughter-house was well run.

Butchers' Shops. The eight shops in the district were regularly inspected for cleanliness and for the quality of the products sold.

Bakehouses. The twelve bakehouses were inspected and found to be in good order. They were kept clean and were well run.

Of the several complaints of outbreaks of Gastro-Enteritis, where bacteriological tests had proved negative and where it was considered that the war bread was probably the cause, no blame could be attached to the bakehouses, nor to the methods of baking employed there.

Hawkers' Vehicles. These were inspected on the highways in the course of their delivery rounds. On the whole they were satisfactory and well kept.

Condemnation of Food Unfit for Human Consumption.

The details and amounts of food condemned will be found in Mr. Southworth's Report.

Water Supply.

During the war years it was not permissible to publish details of water undertakings. In each report for the years of the war, some general remarks were made upon the water supplied by the Authority, and as many details were given as the Minister's interdiction allowed. For this year's report the Minister has asked that certain details should be included, and I am indebted to Mr. Watkinson, the Council's Water Engineer and Surveyor, for a summarised report upon the state of the water undertaking. His report is given in full and appended to this Annual Report.

Sewage and Sewage Disposal.

There were no changes in the methods of sewage disposal during the year. The North side of the district is still unsewered, and the overflow from the septic tanks fouls the streams and causes unpleasant odours in hot weather.

Rivers and Streams.

The County Council, through its Joint Rivers Pollution Committee, is responsible for the streams and rivers in the district.

Closet Accommodation.

The water carriage system was universal throughout the district in 1944. There was 1 conversion from a pail closet to a fresh-water closet during the year. The details are given below:—

Number of premises supplied with water—3,407.
Number of houses on the water carriage system—3,383.
Number of fresh-water closets—3,509.
Number of privy middens—4.
Number of pail closets—11.

Public Cleansing.

In the year 1944 there were 4,412 dry ashbins and 4 dry ashpits in the district. These were emptied weekly. The work was carried out by the Department of the Engineer and Surveyor.

Sanitary Inspection of the District.

In Mr. Southworth's Report, appended, will be found details of the numbers of inspections, notices given, defects rectified, and an account of the sanitary work generally carried out in the district during 1944.

Housing.

No new houses were built during the year. The number of inspections made for housing defects, the number of notices given and the result of these notices will be found in Mr. Southworth's Report.

School Accommodation.

The schools were overcrowded during the year. The normal residential child population was greater than the accommodation available, and the presence of child evacuees increased the problems of accommodation.

Tuberculosis Order, 1938.

Only 1 sample of milk out of the 148 submitted to tests for the Tubercle Bacillus contained the organism. This was reported through the County Medical Officer of Health to the Ministry of Agriculture. As a result of their investigations a cow in an advanced state of Tuberculosis was slaughtered under the Order.

New Legislation.

None noteworthy.

Factories and Workshops.

Regular inspections were made.

Appended Reports.

(1) Report of Mr. Southworth, Sanitary Inspector.
(2) Water Report—Mr. Watkinson, Water Engineer.

In conclusion, I desire to express my appreciation of the efficient work carried out by the Sanitary Inspector, especially under the difficult circumstances when evacuees were being billeted, in which work he took a very prominent part. He has been a most courteous and loyal colleague.

I desire also to thank Mr. Watkinson, Water Engineer and Surveyor, for his co-operation and for his reports.

I am,

Your obedient Servant,

G. G. WRAY.

October, 1945.

REPORT OF THE SANITARY INSPECTOR FOR THE YEAR 1944.

Mr. Chairman, Lady and Gentlemen,

I have great pleasure to report on the year 1944 as Sanitary Inspector to the Urban District Council of Fulwood.

The early part of this year was a busy one, although the Sanitary work was mainly of a routine character. The milk-producing farms were visited, samples of milk were obtained at the producing farms, and during retail delivery to the consumers. Houses, bedding, and other articles were disinfected where cases of Infectious Diseases occurred, and when requested by householders.

The slaughter-house was regularly visited, and the carcases and offal of animals slaughtered there were inspected.

Information was received at the office regarding the occurrence of Diarrhœa in a number of families living in the same road. Samples of milk, water and faeces from the milk retailers were examined, together with a specimen of blood. The results of the examination did not reveal the presence of any causative organism.

A sample of milk, as supplied to the Fulwood and Cadley School, was examined for the presence of Tubercle Bacilli, and an informal sample from the same school was taken for examination under the Food and Drugs Act. These samples were reported as satisfactory.

During February I attended lectures in Rodent Control at Morecambe, which were given by officials of the Ministry of Food. Inspections were regularly made at requisitioned houses, and the repair work was supervised.

Samples of Pasteurised Milk as retailed in the district, and treated by the plant licensed by the Authority, were obtained each month, and the results were generally good.

A few cases of Scarlet Fever occurred during the Spring of the year, and the houses, together with parcels of bedding and library books, where these cases occurred, were disinfected.

Inspections were made at houses where repairs were being carried out, and recommendations were given to applicants who intended to make repairs which would abate nuisances.

During the late Spring a few members of H.M. Forces returned to the district on leave from abroad, some of whom were contacts of Smallpox, and they were kept under constant supervision by visits to their homes at the request of the Medical Officer of Health.

Inspections of food were regularly made at the Navy, Army, and Air Force Institutes Shop and Store at Fulwood Barracks, and also at other shops in the district. Unsound Foods which were considered suitable were disposed of in the Council's kitchen waste bins.

At the request of the Ministry of Food the Council appointed a Rodent Operative. Mr. Marsh was appointed, and commenced his duties in this capacity early in May. A survey of rodent infestation in the district was made, and premises have been successfully treated from the time of his appointment. The numbers of premises treated, visits made to premises, and complaints received, are appended.

Milk samples continued to be obtained each month, and a farmer voluntarily made improvements to his cowshed. The floor was concreted, additional natural light and ventilation were provided, and the walls were cement rendered to a height of approximately 4ft. 6in. above floor level.

An owner-occupier of a house in the district converted a pail closet to a water closet. New drains were laid, and a septic tank and filter were constructed.

During the summer months the slaughtering of horses at the licensed slaughter-house reached a higher level than had previously been recorded. More than twenty horses were slaughtered and inspected each month. During the year under review the slaughter-house was well maintained, and the Byelaws of the Authority were observed.

Another farmer in the district made extensive improvements to his cowsheds. The height from floor to ceiling was increased, new floors and channels were laid in cement, the walls were finished in cement to a height of 4ft. 6in. above floor level, additional light and ventilation were provided and new drains were laid. The dairy walls were rendered in cement, and the floor was concreted.

Nuisances continued to be abated, milk samples obtained, and the disinfection of articles and premises was carried out.

During the end of July and early August, evacuees were sent from districts around London to this district, and they had to be billeted. Although the Council requisitioned more houses for the purpose of housing these evacuees, the accommodation was insufficient, and temporary overcrowding in these houses resulted. Many houses in the district had to be visited to find accommodation for the evacuees, and this occupied an undue proportion of my time. Within a few days of their arrival notifications were received by the Medical Officer of Health regarding cases of notifiable diseases occurring in the children. The houses were visited, and arrangements had to be made for their removal to the County Council Sick Bays at Poulton-le-Fylde and Waddow Hall.

In addition to the work connected with evacuation, the routine sanitary work of the department continued. Nuisances were abated, milk samples obtained, and horse carcases inspected.

Many inspections were made necessary at the houses occupied by the evacuees, due to the improper use of drains and sanitary fittings. Arrangements had to be made for re-billeting persons who the Local Tribunal decided should be found alternative accommodation. The chief difficulty in this connection was to find householders who had the accommodation and who were willing to take them. This necessitated extensive canvassing and very numerous visits to houses. A large amount of time was devoted to compromising of differences of a domestic character between the various groups of evacuees. Complaints were unnecessarily frequent, and much time was expended in dealing with these.

The general sanitary work continued to be carried out, and, as in previous years, the bakehouses in the district were inspected. These are all well kept, and the majority of the bakehouses are very good, but a few could be improved by extension.

Inspections of foods continued to be made at the N.A.A.F.I., at Fulwood Barracks, and shops in the district.

The routine inspections of repairs to houses, inspections required for the abatement of nuisances, and disinfection of houses and articles were carried out.

Further samples from Fulwood and Cadley Council School were examined for the presence of Tubercle Bacilli, and for the purposes of the Food and Drugs Act. Both samples were satisfactory.

A few old houses were visited, and, in my opinion, about six of them appear to be unfit for human habitation.

Work in connection with evacuation was almost unceasing, and visits to the houses had to be made regularly until the end of the year.

Four Dealers' Licences to retail Pasteurised Milk in the district, and one Pasteuriser's Licence were issued. In addition, one Supplementary Licence was issued for the retail of Tuberculin Tested Milk.

Throughout the year the usual duties of a Sanitary Inspector have been discharged, nuisances have been abated, carcases and other foods intended for human consumption have been inspected, and houses, clothing and other articles have been disinfected. The Infectious Diseases Registers have been accurately kept, and returns have been made each week to the County Medical Officer of Health, and the Registrar General.

The following tables give the number of inspections made, houses disinfected, nuisances abated, informal notices served, horses slaughtered, organs surrendered, milk samples obtained, and foods inspected and found to be unfit for human consumption:—

Inspections made	421
Houses disinfected	47
Nuisances abated	38
Informal Notices served	11
Horses slaughtered	244
Organs surrendered	162
Milk samples obtained	178
Premises visited for Rodent Control	116
Rodent complaints received	38
Premises treated	28

The undermentioned foods were inspected and found to be unfit for human consumption:—

1,230	lbs. Fish.
970	lbs. Oranges.
496	lbs. Bacon.
1,340	lbs. Eggs.
192	lbs. Sausages.
235	lbs. Sausage Meat.
53	lbs. Offal.
252	lbs. Cereals.
80	lbs. Apples.
40	Tins of Milk (assorted).
451	Soups (packets).
79	Jars of Jam.
15	packets Prepared Cereals.
19	Tins, Jars and Packets of various foods.

May I express my thanks to the Medical Officer of Health for his guidance, and to the Officials and Members of the Council, for their co-operation and assistance throughout the year.

I am,

Yours obediently,

DANIEL B. SOUTHWORTH,
Sanitary Inspector.

FULWOOD URBAN DISTRICT COUNCIL.

The following brief notes set out the chief precautionary measures adopted and the general position of the Waterworks Undertaking during the War years.

Reservoirs.

Blast walls were erected to all valve houses and control rooms and heavy planking and sandbags placed above the valves and pipes.

The men based on the Reservoirs were enrolled in the Home Guard as a special Waterworks Unit and were suitably armed.

At least one of these men was on duty throughout the day and night, and for some considerable period a detachment of the Home Guard was also on duty at the Reservoirs.

The men were equipped with anti-gas clothing and had special training in anti-gas precautions and methods of decontamination.

The Reservoir control houses were in telephonic communication with the central control room at the Report Centre, Fulwood, and regular reports were made throughout the day and night.

All air raid warning messages were passed by 'phone to both the Barnsfold and Haighton Reservoirs.

As part of a dispersal policy, approximately half of the Department's stores and tools, including a 500 gallons capacity emergency water tank, were held at the Haighton Reservoir.

Trunk Mains and Distribution System.

Blast walling and timber strutting were provided at the Fulwood Waterworks Depot and the Control Room at the Report Centre.

The men and staff were equipped and trained in anti-gas measures.

At least one man and one member of the technical staff were always on night duty at the Report Centre Control Room, and an additional man reported for duty on the sounding of the siren. If sounds of enemy activity were heard, the total strength of the Department turned out.

Trunk mains were interconnected wherever possible so that the effects of the fracture of any trunk feeder could be reduced to a minimum.

Stocks of pipes were built up to approximately 1% of the total length of mains in the Department's charge, and all special castings in use were at least duplicated.

In order to quickly bridge gaps caused by large bomb craters, emergency caps 12in-5in. in diameter, with suitable valves and hose-pipe connections were purchased. By this means the fractured ends of the main could have been blanked off and connected by hose-pipes, a stock of which was also carried. Stocks of wood plugs were also held for temporarily closing fractured mains. As a further means of enabling emergency supplies to be given, extra stand-pipes were purchased for erection on undamaged mains, and in addition, a large number of simple stand-pipes, each fitted with 3, ¾in. bib-taps, were built up in iron tubing. These stand-pipes, with hydrant keys were distributed to the Wardens' Posts in the Area, and a number of Wardens who volunteered for the work were trained in the operation of hydrants and undertook the responsibility of making supplies available to the public if necesary.

To cover the possibility of any fairly large area being cut off, two 500-gallons capacity tanks were obtained, and suitable mounting lorries were earmarked through the Ministry of War Transport. These tanks were primarily designed for the filling of small capacity static tanks which were placed at all Wardens' Posts. These static tanks were provided with draw-off taps and padlocked lids, and sited with a view to their re-filling from the mobile tankers. They were normally kept full of water and re-charged at regular intervals. The Wardens undertook the responsibility of rationing out supplies to the public.

Two of the trunk mains were connected up to mains of other Water Authorities—The Fylde Water Board and The Preston Corporation. By this means it would have been possible to some degree to have maintained a limited supply if the Reservoirs had been put out of action, and also the Fulwood Authority could, to some extent, have asisted these two outside Authorities.

The question of pollution of fractured mains was dealt with by the provision of a Wallace and Tiernan portable chlorinator, and also hand-pumps for injecting some chlorinating agent. Chlorine gas cylinders were purchased and stocks of " chloros " and bleaching powder carried. Certain men were specially trained in the work of chlorination and testing for chlorine residual.

In addition, a leaflet was issued to every household in the Area of Supply, giving instructions on how to render water safe for domestic consumption, and advising people to store some chlorinating agent such as " chloros " and also some " hypo."

Chloramination plant was also installed at the Barnsfold Reservoirs. A Wallace & Tiernan manual controlled instrument was put down to treat the raw water entering the reservoirs, and the practice has been to maintain a residual of 0.5 p.p.m. in the water as it actually passes the inlet cill. It is now found that the water over the outlet valves has a fairly constant residual of 0.02 p.p.m. A further Wallace & Tiernan automatically controlled plant was installed on the outlet mains, and a dose of 0.1 p.p.m. has been found sufficient to maintain a slight chlorine residual of the order of approximately 0.01 p.p.m. throughout the Supply Area. By means of this outlet plant it would have been possible to increase the chlorine residual in the water passing into supply, if circumstances had warranted it.

Stocks of tools were generally increased, and two valuable aids in the shape of a power operated pump and road breaker were purchased.

The Department was rendered mobile by th purchase of a 15cwt. van and 3 trailers. The trailers were fitted out for different purposes, and generally speaking the provision of this transport enabled the Department to function more efficiently, even with a reduction in manpower.

Regional Aid Scheme.

The whole of the North-West Region was linked for purposes of mutual aid, and Fulwood was a member of the Preston Group.

Fulwood undertook to maintain a mobile squad consisting of a mains layer and mate, with all necessray pipe jointing equipment, and later this offer of help was extended to Authorities in the South of England.

Under this scheme, Fulwood could have asked for similar assistance in the way of trained labour, in addition to supplies of pipes and special castings.

The Preston Group of Water Engineers met on 18 occasions and discused problems and pooled experience, and the Fulwood mobile squad made journeys to the depots of all the Group Authorities in order to familiarise themselves with routes and meet the key men with whom they might have to work.

The whole Undertaking was controlled from the Report Centre, where large-scale maps of the Area of Supply showing all mains, valves and hydrants, were provided.

The trained strength of the Undertaking consisted of the Engineer, Assistant Engineer, and 10 men. The 10 men included 4 mains layers, and with the addition of ordinary labour, it would have been possible to have had 3 repair gangs functioning, in addition to trained men dealing with the provision of emergency supplies.

W. STANLEY WATKINSON,
Water Engineer.

September 8th, 1945.

FULWOOD URBAN DISTRICT COUNCIL.

WATER SUPPLY: 1944.

(1) *whether the water supply of the area and of its several parts has been satisfactory* (a) *in quality,* (b) *in quantity;*

(2) *where there is a piped supply, whether bacteriological examinations were made of the raw water and, where treatment is installed, of the water going into supply; if so, how many and the results obtained; the results of any chemical analyses:*

Figures for M.O.H.'s Report

Water supply to the Area has been

a. satisfactory in quality.
b. satisfactory in quantity.

Bacteriological Analyses.

Raw Water entering Reservoirs.

No analyses undertaken.

Water in Reservoirs.

1 sample. Prob. No. of Coli per 100 c.c.s. 5

Water in Supply.

30 Samples taken.
Prob. No. of Coli per 100 c.c.s, nil. 28 samples.
Prob. No. of Coli per 100 c.c.s, 1. 2 samples.

Of these 30 samples, 25 revealed residual chlorine to be present of an order not exceeding a maximum of 0.06 p.p.m.

Chemical Analyses.

2 samples were taken for chemical analyses.

Sample. 22. 2. 44.

Physical Characters.

A clear Water, possessed of a slight yellowish-brown cast, and containing mere traces of unorganised matter in suspension; free from odour and normal as to taste: pH. 6.8.

Analytical Returns expressed in parts per 100,000:—

Total saline matter in solution	10.0
Non-volatile (mineral) solids	6.4
Loss on ignition (organic & volatile matter)	3.6
Total hardness	5.0
Temporary hardness	1.5
Permanent hardness	3.5
Combined chlorine	1.55
Toxic metals	Nil.
Ammoniacal nitrogen	0.001
Albuminoid nitrogen	0.005
Nitrous nitrogen (nitrates)	Nil.
Nitric nitrogen (nitrates)	0.07

Oxygen absorbed in 3 hrs. at 26.7deg. C.	0.10
Residual chlorine	present
On prolonged standing equivalent to	0.025 p.p.m.

Sample. 28. 10. 44:

Physical characters. A clear water with faint yellowish cast when viewed in depth, free from odour and containing a mere trace of unorganised suspended matter. pH., 6.9

Analytical returns. Results expressed in parts per 100,000.

Total saline matter	11.0
Non-volatile (mineral) solids	7.0
Loss on ignition (organic and volatile)	4.0
Total hardness	5.0
Temporary hardness	1.6
Permanent hardness	3.4
Combined chlorine	1.6

Free ("residual") chlorine, present but not exceeding 0.02 part per million.

Heavy (Toxic) metals	absent
Ammoniacal nitrogen	0.001
Albuminoid nitrogen	0.015
Nitrous nitrogen (nitrates)	absent
Nitric nitrogen (nitrates)	0.030
Oxygen absorbed in 3 hrs. at 26.7deg. C.	0.250

(3) *where the waters are liable to have plumbo-solvent action, the facts as to contamination by lead, including precautions taken and number and result of analyses.*

The water has no plumbo-solvent action.

The ph value was determined on 6 occasions. Results varied between 6.75 and 6.9.

(4) *action in respect of any form of contamination.*

No contamination of water in supply occurred.

The raw water is treated with chloramine before entering the reservoirs, and a chlorine residual of 0.5 to 1.0 p.p.m. is maintained as far as possible as the water actually enters the reservoirs.

The water in the outlet mains is further treated with chloramine at a point immediately below the reservoirs.

The plant is automatically controlled by the flow passing into supply, and a dose equivalent to 0.15 p.p.m. is given, which results in a residual of approximately 0.05 p.p.m. slightly below the point of treatment.

(5) *particulars of the proportion of dwelling houses and the proportion of the population supplied from public water mains* (a) *direct to the houses,* (b) *by means of stand pipes.*

(a) No. of premises supplied direct from the public mains 3407

No. of premises without a supply from the public mains 10

In addition there are 8 Institutions supplied direct from the public mains through meter.

There are only 10 premises in the District not supplied from the public mains, and a scheme to remedy this is shortly to be carried out.

(b) There are no premises supplied from the public mains by means of standpipes.

W. STANLEY WATKINSON,
Water Works Engineer.

March 28th, 1945.